

AMENDMENTS TO THE CLAIMS

Claims 1-22 and 24-46 are pending in the instant application. Claim 23 has been previously cancelled. Claims 1, 9, 17, 27 and 37 are independent claims. Claims 2-8, 10-16, 18-22, 24-26, 28-36, and 38-46 depend from claims 1, 9, 17, 27 and 37, respectively. Claims 1-2, 5-6, 8-22, 24-25, 27, 29-37, 39-42 and 45-46 are amended to clarify the claim language. The Applicant respectfully submits that the claims define patentable subject matter in view of the following remarks.

Listing of claims:

1. (Currently Amended) A method for communication ~~providing load balancing in a hybrid wired/wireless local area network~~, the method comprising:
receiving ~~at least one~~ or more polling message from an access device by ~~at least one~~ or more of a plurality of access points in a hybrid wired/wireless local area network;
responsive to said ~~at least one~~ or more polling message, communicating determining a load on each said one or more of said plurality of access points to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated load; and communicating information of said determined optimal load balancing for said one or more ~~sending said determined load of said each one of said plurality of~~

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access points to said access device, wherein said access device re-establishes communication with one or more of said plurality of access points based on said communicated information of said determined optimal load balancing sent determined load of said each one of said plurality of access points.

2. (Currently Amended) The method according to claim 1, comprising interpreting said ~~at least one or more~~ polling message by said ~~at least one or more~~ of said plurality of access points, which is located in an operating range of said access device.

3. (Previously Presented) The method according to claim 2, comprising selecting an access point from said plurality of access points having a least load and based on a received signal strength of said plurality of access points.

4. (Previously Presented) The method according to claim 1, comprising selecting said one of said plurality of access points, which comprises a least load by said access device to provide service.

5. (Currently Amended) The method according to claim 1, comprising:

sending said received at least one or more polling message from said at least one or more of a plurality of access points to a switch using a messaging protocol message; and

receiving said at least one or more polling message by said switch.

6. (Currently Amended) The method according to claim 2, comprising determining by said switch at least an aggregate load on at least a portion of said plurality of access points.

7. (Previously Presented) The method according to claim 6, comprising sending information corresponding to said determined aggregate load to at least a portion of said plurality of access points using a messaging protocol message.

8. (Currently Amended) The method according to claim 7, wherein comprising redistributing a load by said switch on said at least a portion of said plurality of access points.

9. (Currently Amended) A computer-readable medium for storing a computer program for execution by computer, having at least one or more code section for communication ~~providing load management in a hybrid wired/wireless~~

~~local-area network~~, the ~~at least one or more~~ code section executable by a computer for causing the ~~machine~~ computer to perform the steps comprising:

receiving ~~at least one or more~~ polling message from an access device by ~~at least one or more~~ of a plurality of access points in a hybrid wired/wireless local area network;

responsive to said at least one or more polling message, communicating determining a load on each said one or more of said plurality of access points to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated load; and

communicating information of said determined optimal load balancing for said one or more sending ~~said determined load of said each one of said plurality of access points to said access device, wherein said access device re-establishes communication with one or more of said plurality of access points based on said communicated information of said optimal load balancing sent determined load of said each one of said plurality of access points.~~

10. (Currently Amended) The computer-readable medium according to claim 9, wherein ~~said at least one or more~~ code section comprises code for interpreting ~~said at least one polling message by said at least one or more~~ of said plurality of access points, which is located in an operating range of ~~said access device~~.

11. (Currently Amended) The computer-readable medium according to claim 10, wherein said ~~at least one~~ or more code section comprises selecting an access point from said plurality of access points having a least load and based on a received signal strength of said plurality of access points.

12. (Currently Amended) The computer-readable medium according to claim 9, wherein said ~~at least one~~ or more code section comprises code for selecting said one of said plurality of access points, which comprises a least load by said access device to provide service.

13. (Currently Amended) The computer-readable medium according to claim 9, wherein said ~~at least one~~ or more code section comprises code for:

 sending said received ~~at least one~~ or more polling message from said ~~at least one~~ or more of a plurality of access points to a switch using a messaging protocol message; and

 receiving said ~~at least one~~ or more polling message by said switch.

14. (Currently Amended) The computer-readable medium according to claim 10, wherein said ~~at least one~~ or more code section comprises code for

determining at least an aggregate load by said switch on at least a portion of said plurality of access points.

15. (Currently Amended) The computer-readable medium according to claim 14, wherein said ~~at least one~~ or more code section comprises code for sending information corresponding to said determined aggregate load to at least a portion of said plurality of access points using a messaging protocol message.

16. (Currently Amended) The computer-readable medium according to claim 15, wherein said ~~at least one~~ or more code section comprises code for redistributing a load by said switch on said at least a portion of said plurality of access points.

17. (Currently Amended) A system for communication providing network management in a ~~hybrid wired/wireless local area network~~, the system comprising:

~~at least one~~ or more receiver of ~~at least one~~ or more of a plurality of access points, operable to receive ~~at least one~~ or more polling message from an access device in a hybrid wired/wireless local area network;

~~at least one~~ or more controller operable to ~~determine~~ communicate a load on ~~each~~ said one or more of said plurality of access points to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality

of access points based on said communicated load in response to said ~~at least~~
one or more polling message; and

~~at least one or more transmitter operable to communicate information of~~
~~said determined optimal load balancing for send said determined load of said each~~
one or more of said plurality of access points to said access device, wherein said
access device re-establishes communication with one or more of said plurality of
access points based on said communicated information of said optimal load
balancing ~~sent determined load of said each one of said plurality of access points.~~

18. (Currently Amended) The system according to claim 17, wherein said ~~at~~
~~least one or more controller~~ is operable to interpret said ~~at least one or more~~
polling message, said ~~at least one or more controller~~ being associated with ~~at least~~
one or more of said plurality of access points that is located in an operating range
of said access device.

19. (Currently Amended) The system according to claim 18, wherein said ~~at~~
~~least one or more controller~~ is operable to select an access point from said
plurality of access points having a least load and based on a received signal
strength of said plurality of access points.

20. (Currently Amended) The system according to claim 17, wherein said at least one or more controller is operable to select said one of said plurality of access points, which comprises a least load by said access device to provide service.

21. (Currently Amended) The system according to claim 17, wherein said at least one or more transmitter is operable to send said received ~~at least one or more~~ polling message from said ~~at least one or more~~ of a plurality of access points to [[a]]said switch using a messaging protocol message.

22. (Currently Amended) The system according to claim 21, wherein said at least one or more receiver is operable to receive said ~~at least one or more~~ polling message ~~by said switch~~.

23. (Cancelled)

24. (Currently Amended) The system according to claim 17, wherein said at least one or more controller is operable to send information corresponding to an aggregate determined load to at least a portion of said plurality of access points using a messaging protocol message.

25. (Currently Amended) The system according to claim 24, wherein said at least one or more controller is operable to redistribute a load on said at least a portion of said plurality of access points.

26. (Previously Presented) The system according to claim 17, wherein said at least one controller is one or more of: a bandwidth management controller, a quality of service controller, a load balancing controller, a session controller and a network management controller.

27. (Currently Amended) A method for communication, the method comprising:

transmitting [[a]] one or more polling message from a mobile station in a hybrid wired/wireless local area network, wherein said transmitted one or more polling message causes one or more of a plurality of access points that receives said transmitted one or more polling message to determine communicate [[its]]a corresponding load to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated corresponding load;

receiving from said one or more of said plurality of access points, said determined optimal load balancing corresponding load for said one or more of said plurality of access points; and

re-establishing communication by said mobile station with one of said plurality of access points based on said received optimal load balancing received determined corresponding load for said one or more of said plurality of access points.

28. (Previously Presented) The method according to claim 27, comprising re-establishing communication by said mobile station with said one of said plurality of access points based on a received signal strength of said one or more of said plurality of access points.

29. (Currently Amended) The method according to claim 27, comprising selecting said one of said plurality of access points for said re-establishing of said communication based on said determined load optimal load balancing and a RSSI associated with one of said plurality of access points.

30. (Currently Amended) The method according to claim 29, comprising selecting said one of said plurality of access points having a least load optimal load balancing for said re-establishing of said communication.

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31. (Currently Amended) The method according to claim 30, comprising broadcasting said one or more polling message from said mobile station within said hybrid wired/wireless local area network.

32. (Currently Amended) The method according to claim 31, wherein said broadcasted one or more polling message is received by [[a]] said plurality of access points switch within said hybrid wired/wireless local area network.

33. (Currently Amended) The method according to claim 32, wherein said switch determines an aggregate load on said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted one or more polling message.

34. (Currently Amended) The method according to claim 33, wherein said switch reconfigures said one or more of said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted one or more polling message.

35. (Currently Amended) The method according to claim 27, wherein a load on said one or more of said plurality of access points is

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redistributed based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.

36. (Currently Amended) The method according to claim 27, wherein an aggregate bandwidth of said one or more of said plurality of access points is optimized based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.

37. (Currently Amended) A system for communication, the system comprising:

one or more processors in a mobile station, said one or more processors are operable to transmit [[a]] one or more polling message from said mobile station in a hybrid wired/wireless local area network, wherein said transmitted one or more polling message causes one or more of a plurality of access points that receives said transmitted one or more polling message to determine communicate [[its]]a corresponding load to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated corresponding load;

said or more processors are operable to receive from said one or more of said plurality of access points, information of said determined optimal load balancing ~~corresponding load~~ for said one or more of said plurality of access points; and

 said or more processors are operable to re-establish communication by said mobile station with one of said plurality of access points based on said information for said determined optimal load balancing ~~received determined corresponding load for said one or more of said plurality of access points.~~

38. (Previously Presented) The system according to claim 37, wherein said or more processors are operable to re-establish said communication by said mobile station with said one of said plurality of access points based on a received signal strength of said one or more of said plurality of access points.

39. (Currently Amended) The system according to claim 37, wherein said or more processors are operable to select said one of said plurality of access points for said re-establishing of said communication based on said determined ~~load~~ optimal load balancing and a RSSI associated with one of said plurality of access points.

40. (Currently Amended) The system according to claim 39, wherein said or more processors are operable to select said one of said plurality of access points having a least ~~load~~ optimal load balancing for said re-establishing of said communication.

41. (Currently Amended) The system according to claim 40, wherein said or more processors are operable to broadcast said one or more polling message from said mobile station within said hybrid wired/wireless local area network.

42. (Currently Amended) The system according to claim 41, wherein said broadcasted one or more polling message is received by [[a]] said plurality of access points switch within said hybrid wired/wireless local area network.

43. (Currently Amended) The system according to claim 42, wherein said switch determines an aggregate load on said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted one or more polling message.

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44. (Previously Presented) The system according to claim 43, wherein said switch reconfigures said one or more of said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted polling message.

45. (Currently Amended) The system according to claim 37, wherein a load on said one or more of said plurality of access points is redistributed based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.

46. (Currently Amended) The system according to claim 37, wherein an aggregate bandwidth of said one or more of said plurality of access points is optimized based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.